



# SPECIFICATIONS FOR APPROVAL

Customer Name: 深圳金亚太科技有限公司

Product Name: WIFI&BT Antenna

Product Model: \_\_\_\_\_

Part Number: LJF02-23072908-R0A

Write By : Huxuwen

Issued Date: 2023-07-29

## CUSTOMER

ENGINEER R&D DEPT	BUSSINESS DEPT	APPROVAL
黄群		

## LEJIN

R&D DEPT	ENGINEER DEPT	APPROVAL

REV	MODIFIED DESCRIPTION	DATE	REMARK
V1.0	Initial Draft Release	2023/07/29	



## Index

1. Cover	1
2. Index	2
3. Product Specification	3
4. Test Equipment & Conditions	3
5. Test Report	4
6. Reliability Test	5
7. Assemble type	6
8. Product Drawing	7



### 3.Product Specification

A. Electrical Characteristics	
<b>Frequency</b>	2400MHz ~2500 MHz 5150MHz ~5850 MHz
<b>VSWR</b>	<2.0
<b>Efficiency</b>	≥40%
<b>Impedance</b>	50Ohm
<b>Polarization</b>	Linear
<b>Gain(5.8GHz)</b>	≤2.50dB
B. Material & Mechanical Characteristics	
<b>Material of Radiator</b>	FPC(black),LJWF82A
<b>Cable Type</b>	Φ1.13mm,L88mm,Black
<b>Connector Type</b>	IPX1
<b>Dimension</b>	45.0*12.0mm
C. Environmental	
<b>Operation Temperature</b>	- 20 °C ~ + 70 °C
<b>Storage Temperature</b>	- 30 °C ~ + 85 °C
<b>Humidity</b>	40%~95%

### 4.Test Equipment & Conditions

- 1.Network Analyzers Agilent 8753D/5071C
- 2.HSPA and LTE protocol test set R&S CMW500 -PT
- 3.Communications Test Set Agilent 8960
- 4.3D Chamber Test System

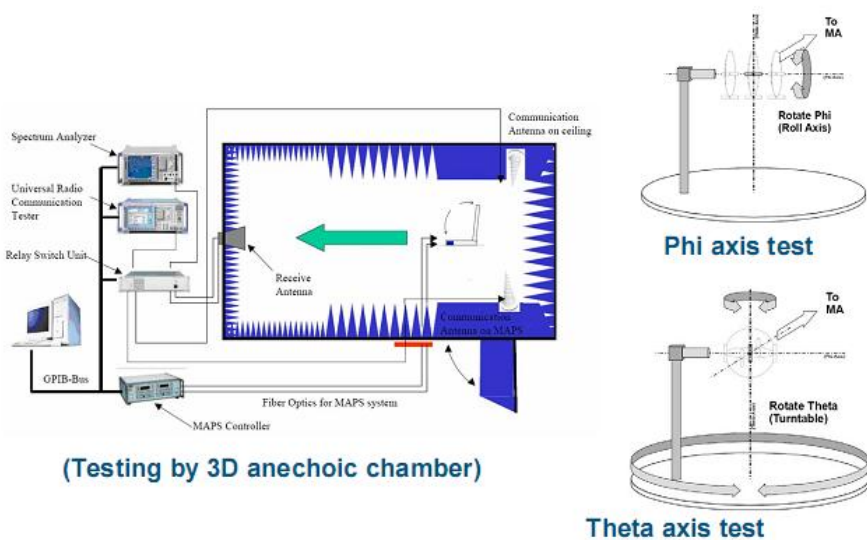


Chart 1 Test topology



## 5. Test Report

### 5.1 Voltage Standing Wave Ratio(VSWR).

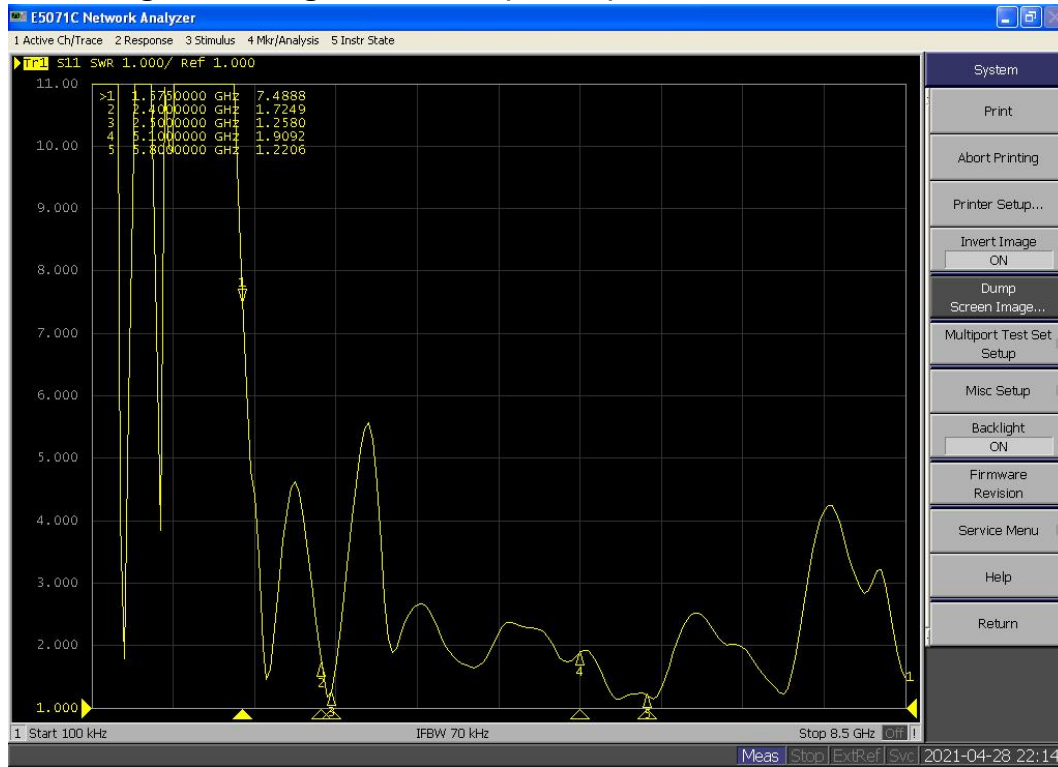


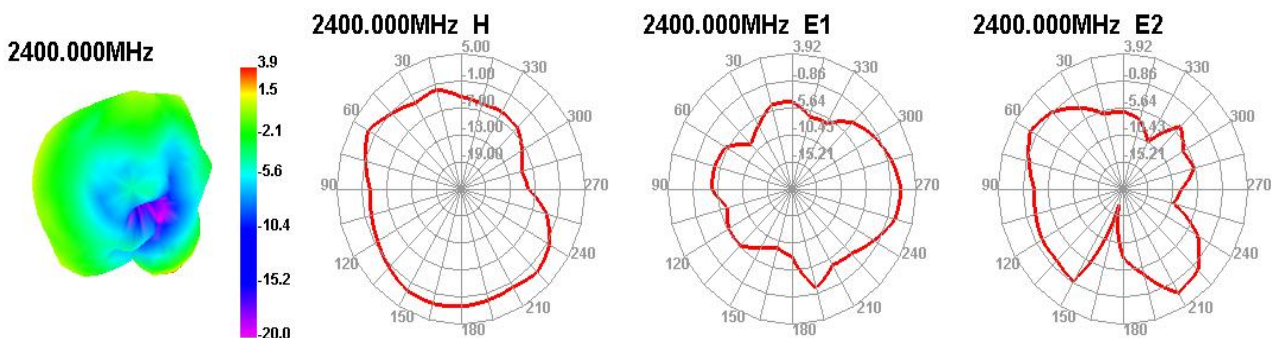
Chart 2 VSWR

### 5.2 Efficient and gain.

Passive Test For 2.4G	Freq(MHz)	2400	2410	2420	2430	2440	2450	2460	2470	2480	2490	2500
	Effi(%)	44.23	50.11	46.89	50.76	46.81	49.61	45.86	51.10	47.41	47.89	41.85
	Gain(dBi)	1.84	1.92	1.97	2.08	2.05	2.19	1.95	2.07	2.17	2.06	1.80

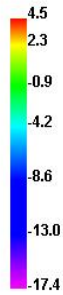
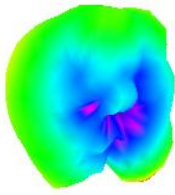
Passive Test For WIFI 5G	Freq(MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
	Effi(%)	51.22	53.19	50.84	54.64	52.43	54.77	57.28	52.72	54.71	50.55	55.99	51.51	53.22	57.32	51.92
	Gain(dBi)	2.11	2.25	2.19	2.24	2.22	2.15	2.24	2.18	2.12	2.28	2.23	2.15	2.24	2.21	2.15

### 5.3 Radiation pattern.

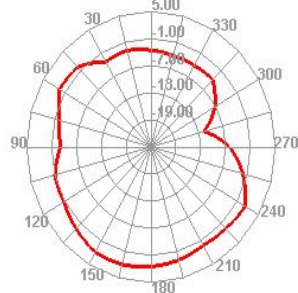




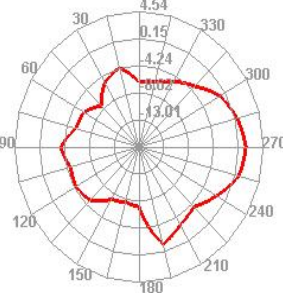
2450.000MHz



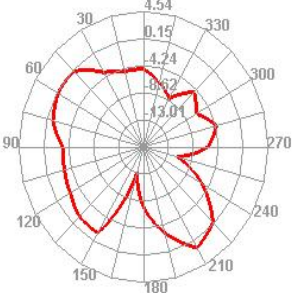
2450.000MHz H



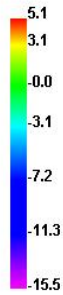
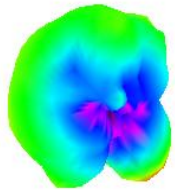
2450.000MHz E1



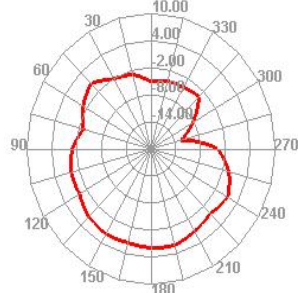
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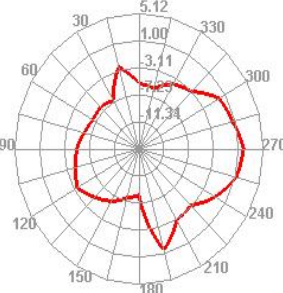
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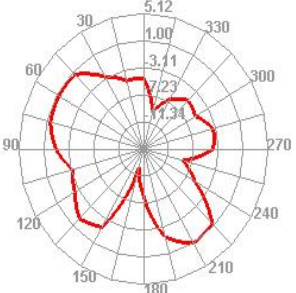
2500.000MHz H



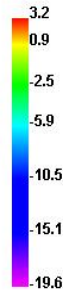
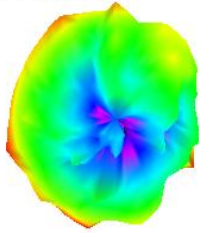
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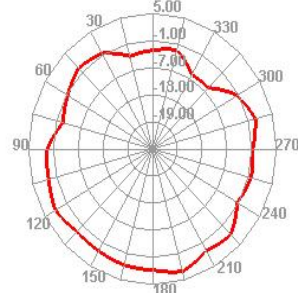
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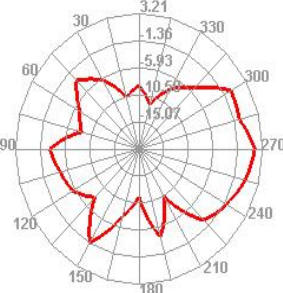
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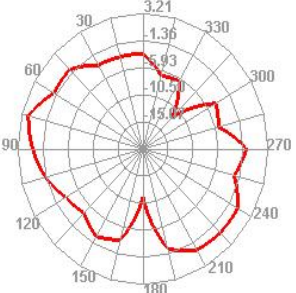
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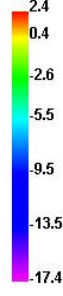
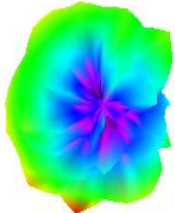
5200.000MHz E1



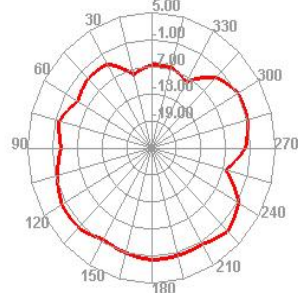
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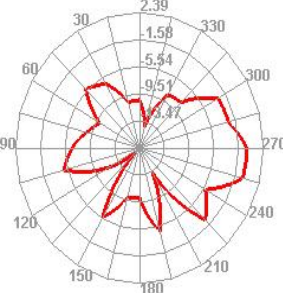
5550.000MHz



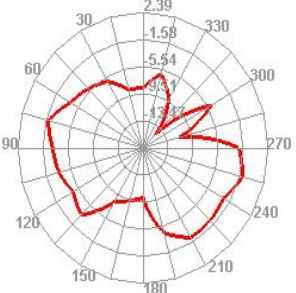
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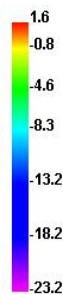
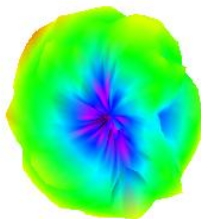
5550.000MHz E1



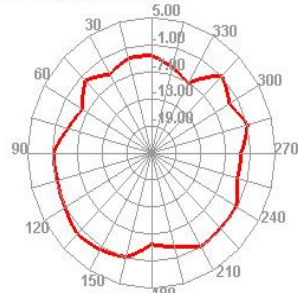
5550.000MHz E2



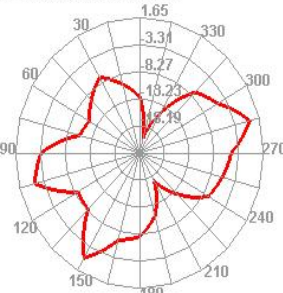
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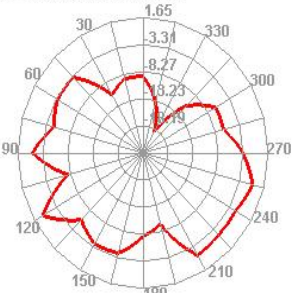
6000.000MHz H



6000.000MHz E1



6000.000MHz E2





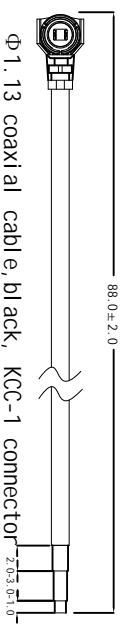
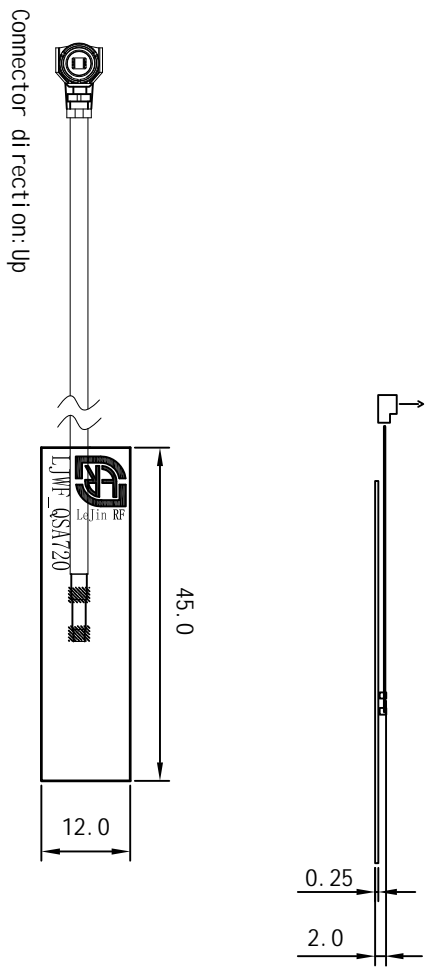
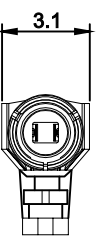
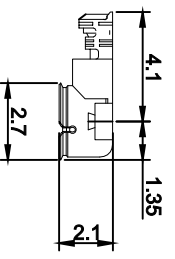
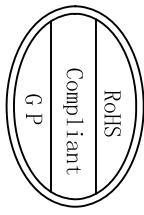


## 6. Reliability Test

Test Item	Test condition	Equipment	Specification	Result
1 Low Temp. Storage Test	Temperature: -30℃, Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-down the temp. to -30℃ in one hour, store antenna for 44 hours; step-up temp to 25℃, test antenna after 2 hours.	Temp.&Hum i. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
2 High Temp./High Humid Storage Test	Temperature: 85℃ Humidity: 85% RH Time:48hrs Test condition: Placing antenna in a Low/High Temperature Chamber, keep the temp is 25℃ and humidity is 65% for one hour, then step-up the temp. to 80℃ and the humidity up to 85% in one hour, store antenna for 44 hours; step-down temp to 25℃, test antenna after 2 hours.	Temp.&Hum i. Tester	No material deformation is allowed. Electronic Performance is ok .	PASS
3 Salt-Spray 6 pray Test	Placing antenna in the Salt-Spray Tester ,set the test condition , Temp: 35±2℃ Humidity: 85% NaCl salt spray :5±1%.PH value :6.5~7.2 Testtime:24hours	Salt-Spray Tester	No color change No appear rusting	PASS

## 7. Assemble type(omit)

## 8. Product Drawing



- Remark:**
- 1.FPC material:Electrolytic copper.
  - 2.Backing in behind:3M300LSE.
  - 3.Tolerance : Cutting die:±0.1mm;Circuit on FPC:±0.05mm ; others are ±0.05mm.
  - 4.ROHS:(Pb,Hg,Cr+6,PBBs,PBDEs),<1000ppm; Cd,<100ppm.

Rev	Description	Date	Remark
1	New drawing		

深圳乐进射频科技有限公司 SHEN ZHEN LEJIN RADIO FREQUENCY CO., LTD		Project: Geniatech Part Name: WIFI ANT Part No.: Material: Treatment: LJF02-23012908-R0A	
0~10 ±0.05 10~18 ±0.10 18~30 ±0.12 30~40 ±0.15 40~ ±0.20	Third Angle 0.02 ∅0.03 0.02 0.04 ±0.5°	Date: 2023-07-29 Designed by: 1.FPC Checked by: Material: E Ref: Control yti Approved by: C copper. Unit: mm Spec: Behind: 3M3	Date: Designed by: Checked by: Approved by: Unit: mm Spec: